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a propellant consisting of a propane/butane mixture for jointly spraying the paint material and hardener from the spray can, wherein the weight ratio of paint material and hardener to propellant amounts to 75:25 to 70:30.

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A marked-up copy of the prior pending claims showing the changes made is attached hereto as Exhibit A.

#### REMARKS

Reconsideration and withdrawal of the Examiner's rejection of the above-identified application is respectfully requested in view of the foregoing amendments and following remarks. Claims 1-7 are in the application. Claims 1, 2 and 4-6 have been amended. No new matter has been added.

The Examiner rejected claims 1-7 under 35 U.S.C. §112, stating that several terms are unclear. Specifically:

"Paint material comprising HS (high solid) acrylic resins":

Acrylic resins are polymers obtainable by homo- or copolymerisation of (meth)acrylic esters if necessary in the presence of further monomers, such as styrene or vinyl esters. As any other polymer, an acrylic resin is a collective of chemical uniform, but as a rule concerning their polymerisation grade, molecular weight and chain length distinguishing macromolecules.

An aerosol preparation according to the present patent application contains, as e.g. originally disclosed on page 9, second paragraph of the specification, at least one defined acrylic resin in terms of a collective of chemical uniform macromolecules or a mixture of two or even more defined acrylic resins.

Therefore, applicant has replaced the objected terms with "at least one . . ." to clarify the claims.

"Hardener comprising polyisocyanates":

The plural "polyisocyanates" in claims 1, 4 and 6 was selected to consider the variations in the chain length of the chemical uniform macromolecules. An aerosol preparation according to the present patent application contains one polyisocyanate in terms of a collective of chemical uniform macromolecules. Claims 1, 4 and 6 have been amended accordingly.

"Mean molecular weight":

Both the terms "mean molecular weight" and "average molecular weight" refer to the "number average molecular weight". Claims 1, 2, 4, 5 and 6 have been amended accordingly.

"High, medium and low solid":

In connection with paints, the items "High solid", "medium solid" and "low solid" are commonly used terms on the market and are

defined in many guidelines, such as the VOC (Volatile Organic Compounds) guideline of the European Council of Paint, Printing Ink and Artists (CEPE), the National Rule of the U.S. Environmental Protection Agency (EPA), the Californian Rule 1151 SCQAMD (Los Angeles) and the Californian Rule 45 BAAQMD (San Francisco).

The respective terms as used in the present patent application relate to the specification of the VOC guideline of the CEPE. According to this specification, clear lacquers and fillers, which are ready for spraying at the gun at a solid concentration of 250 to 420 g/l, are classified as "high solid", whereas those, which are ready for spraying at the gun at a solid concentration of 420 to 540 g/l resp. more than 540 g/l, are classified as "medium solid" respectively and "low solid".

Analogous to this specification for the final product, i.e. clear lacquer or filler, the terms "high/medium/low solid" are likewise used within the present patent application for acrylic resins, which are semifinished products and not sprayed alone. Accordingly, Applicant submits that the terms "high/medium/low solid" are sufficiently understood by those of skill in the art.

"About 75:25 to 70:30":

Applicant has deleted the term "about".

"Propane/Butane"

As clearly indicated by the oblique stroke and as originally disclosed on page 8, 2nd paragraph, this term refers to a mixture of propane and butane. Claim 1 has been amended accordingly.

"Low component of styrene"

The word "component" in claim 4 was a mistranslation and has been amended to "content" as originally disclosed on page 11, 2nd paragraph.

According to the state of the art, acrylic resins containing OH-groups and providing a medium number average molecular weight are solutions containing 55 % resin. Acrylic resins with low content of styrene are those 55 % resin containing solutions comprising less than 10 % styrene, whereas acrylic resins with medium resp. high content of styrene comprise 10 to 20 resp. more than 20 %.

The Examiner rejected claims 1-7 under 35 U.S.C. §103 as being unpatentable over Gormley et al. Applicant respectfully traverses. Gormley et al. disclose low volatile organic compound hair cosmetic compositions, comprising:

- i) 0.001 bis 0.9 % (w/w) of certain polydimethylsiloxane block copolymers,
- ii) 1 bis 15 % (w/w) of at least one film-forming resin, such as a copolymer of methylmethacrylate,
- iii) up to 70 % (w/w) of a solvent, such as a short chain alcohol,
- iv) between 10 and 60 % (w/w) of a propellant, such as dimethyl ether or short chain hydrocarbons, and
- v) water.

According to the specification low volatile organic compound hair cosmetic compositions known in the state of the art have the disadvantage of poor spray characteristics resulting from various phenomenon, such as surface tension and foaming (cf. col. 1, l. 45-57). These disadvantages of low volatile organic compound hair cosmetic compositions could be overcome by using water insoluble, hydrolytically stable polypropylene-modified polydimethylsiloxane block copolymers (component i) resulting in compositions providing high curl retention, fast drying time, low initial curl droop, excellent spray characteristics and improved minimization of contact foaming (see. col. 2, l. 42-49).

This reference has nothing to do with the subject matter of the present invention, i.e. aerosol preparations for two-component paints. In clear contrast to the compositions

disclosed in Gormley, the aerosol preparations according to the present invention are neither water-based nor do they contain polydimethylsiloxane block copolymers at all.

It is an object of the present invention to provide an aerosol preparation for two-component paint spray cans in which the values of certain single-component spray cans are achieved with a propellant gas consisting of a mixture of propane and butane with a certain mixing ratio. For this purpose the compatibility of acrylic resins with the propellant have to be significantly improved. Surprisingly the required compatibility between these components can be achieved by using certain OH-groups containing acrylic resins as disclosed in claims 1, 4 and 6. Gormley does not contain a hint to two-component paints at all nor does it hint that OH-group containing acrylic resins in general are suitable to improve the compatibility with the propellant mixture, nor any hint which precise OH numbers should be selected, nor any hint that the styrene content of the acrylic resins have any influence on the compatibility.

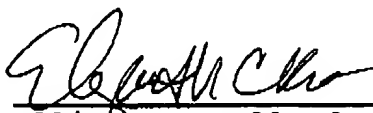
Accordingly, Applicant submits that claims 1-7 as amended are patentable over the prior art, taken either singly or

in combination. Early allowance of the amended claims is respectfully requested.

Respectfully submitted,  
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**CERTIFICATE OF FACSIMILE TRANSMISSION**

Fax No. 703-872-9310

I hereby certify that this correspondence is being sent by facsimile-transmission to the Assistant Commissioner for Patents, Washington, D.C. 20231, on March 1, 2002.



Elizabeth Collard Richter

**EXHIBIT A****Marked-up Copy of Pending  
Claims 1, 2 and 4-6 Showing the Changes Made**

1. (Amended) An aerosol preparation for two-component paint spray cans, comprising:

paint material comprising at least one HS (high solid)<sup>s</sup> acrylic [resins] resin containing OH-groups and with a high solids content and a number mean molecular weight of < 5000, wherein said paint material has no styrene and an OH-number of < 150;

a hardener comprising an aliphatic [polyisocyanates] polyisocyanate, said paint material and hardener being filled in two different containers within a spray can, and united only <sup>applied</sup> immediately prior to their processing, and } 7/2

a [propane/butane] propellant comprising a mixture of propane and butane sprayed jointly with the paint material and hardener from the spray can, such that the weight ratio of paint material and hardener to propellant amounts to [about] 75:25 to 70:30.

2. (Amended) The aerosol preparation according to claim 1, characterized in that the paint material has [an] a number average molecular weight of from 2500 to 4500. } 1/2



4. (Amended) An aerosol preparation for two-component paint spray cans, comprising:

paint material comprising at least one MS (medium solid) acrylic [resins] resin containing OH-groups and having a medium solids content and [an] a number average molecular weight of < 15000, said paint material having a low [component] content of styrene and an OH-number of between 130 and 140;

a hardener consisting of an aliphatic [polyisocyanates] polyisocyanate, said paint material and hardener being filled in two different containers within a spray can and united only immediately before their processing, and

a propellant comprising of a propane/butane mixture for spraying said paint material and hardener from the spray can, wherein the weight ratio of paint material and hardener to propellant amounts to [about] 75:25 to 70:30.

5. (Amended) The aerosol preparation according to claim 4, wherein the paint material has [an] a number average molecular weight of 9000 to 13000.

6. (Amended) An aerosol preparation for two-component paint spray cans, comprising:

paint material comprising at least one LS (low solid) acrylic [resins] resin containing OH-groups and having a low solids content and a higher styrene content, and with [an] a number average molecular weight of > 15000 and an OH-number of < 80;

a hardener comprising an aliphatic [polyisocyanates] polyisocyanate, said paint material and hardener being filled in two different containers within a spray can and united only immediately before their processing; and

a propellant consisting of a propane/butane mixture for jointly spraying the paint material and hardener from the spray can, wherein the weight ratio of paint material and hardener to propellant amounts to [about] 75:25 to 70:30.